

Appl. No. 10/735,161
Amdt. dated Feb. 15, 2005
Reply to Office action of Nov. 15, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Currently Amended) A connector for electrically connecting first data lines to second data lines, comprising:

a first connection part including:

a plurality of connection pins electrically connected with the first data lines;

a supporting body that holds the connection pins; and

a guide body extended from a first longitudinal end of the supporting body in a direction substantially perpendicular to a longitudinal direction of the supporting body, the guide body having a guide groove formed at an inner face of the guide body; and

a second connection part including:

a plurality of connection slots that receive the connection pins to provide electrical connection between the first data lines and the second data lines, the connection slots each having an entrance hole at a front face of the second connection part;

a side face extended from the front face in a direction substantially perpendicular to a longitudinal direction of the front face;

a guide step formed on the side face to be inserted into the guide groove; and

a warpage preventing protrusion formed on the guide step to provide a recess portion at a selected region of the guide step to prevent the connection pins from being bent at the time of detaching the first connection part from the second connection part.

2. (Original) The connector of claim 1, wherein the first connection part further includes:

a second guide body extended from a second longitudinal end of the supporting body in a direction substantially perpendicular to the longitudinal direction of the supporting body, the second guide body having a second guide groove formed at an inner face of the second guide body.

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3. (Original) The connector of claim 2, wherein the second connection part further includes:

a second guide step formed on a second side face opposite to the side face, the second guide step being inserted into the second guide groove; and

a second warpage preventing protrusion formed on the second guide step to prevent the connection pins from being bent.

4. (Original) The connector of claim 3, wherein the side face has a length different from a length of the second side face.

5. (Original) The connector of claim 4, wherein the guide body has a length different from a length of the second guide body.

6. (Original) The connector of claim 5, wherein the lengths of the side face and the guide body are substantially identical to each other, and the lengths of the second side face and the second guide body are substantially identical to each other.

7. (Original) The connector of claim 1, wherein the guide step has a length substantially identical to a length of the guide body.

8. (Original) The connector of claim 1, wherein the guide body includes:

a first guide body portion to be in contact with the side face when the first and second connection parts are combined; and

a second guide body portion to be in contact with the guide step when the first and second connection parts are combined,

wherein the first and second guide body portions form side walls of the guide groove.

9. (Original) The connector of claim 8, wherein the first guide body portion has a width larger than a width of the second guide body portion.

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10. (Original) The connector of claim 9, wherein a difference between the widths of the first and second guide body portions is substantially same as a height of the guide step.

11. (Original) The connector of claim 1, wherein the connection slots each include a connection terminal that electrically connects a corresponding connection pin to a corresponding second data line, the connection terminal having a fixing portion for securely gripping the connection pin.

12. (Original) The connector of claim 1, wherein the side face has a width larger than a width of the guide step.

13. (Original) The connector of claim 12, wherein a widthwise center of the guide step is offset from a widthwise center of the side face.

14. (Original) The connector of claim 1, wherein the warpage preventing protrusion is protruded at an end portion of the guide step adjacent to the front face, the warpage preventing protrusion being placed in the guide groove to support the guide body when the first connection part is rotated to be detached from the second connection part.

15. (Original) The connector of claim 14, wherein the warpage preventing protrusion has a length smaller than a length of the guide step.

16. (Original) The connector of claim 15, wherein the warpage preventing protrusion has a width smaller than a width of the guide step.

17. (Original) The connector of claim 14, wherein the warpage preventing protrusion has a wedge shape of which top surface is smaller than a bottom surface.

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18. (Original) The connector of claim 1, further including a cover that receives the first connection part, the cover including a connection member formed at a side face of the cover to be in contact with the guide body when the first connection part is received in the cover.

19. (Original) The connector of claim 18, wherein the guide body further includes a connection groove formed at an outer surface of the guide body, the connection member being placed in the connection groove when the cover receives the first connection part.

20. (Original) The connector of claim 1, wherein the guide body has a chamfer formed at an inner corner of an edge opposite to the supporting body.

21. (Original) The connector of claim 20, wherein the chamfer is in contact with the side face and the guide step when the first connection part is rotated to be detached from the second connection part.

22. (Original) The connector of claim 1, wherein the second connection part further includes a warpage preventing opening formed at a corner at which the side face, the front face and the guide step meet each other, the warpage preventing opening being extended from a connection slot adjacent to the side face.

23. (Original) The connector of claim 22, wherein the warpage preventing opening forms a void space into which corresponding one of the connection pins is moved from the connection slot adjacent to the side face.

24. (Currently Amended) A connector for electrically connecting first data lines to second data lines, comprising:

a first connection part including:

- a plurality of connection pins electrically connected with the first data lines;
- a supporting body that holds the connection pins;

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a guide body extended from a first longitudinal end of the supporting body in a direction substantially perpendicular to a longitudinal direction of the supporting body, the guide body having a guide groove formed at an inner face of the guide body; and

a chamfer formed at an inner corner of an edge of the guide body opposite to the supporting body; and

a second connection part including:

a plurality of connection slots that receive the connection pins to provide electrical connection between the first data lines and the second data lines, the connection slots each having an entrance hole at a front face of the second connection part;

a side face extended from the front face in a direction substantially perpendicular to a longitudinal direction of the front face; and

a guide step formed on the side face to be inserted into the guide groove, the guide step having a front surface adjacent to the front face of the second connection part, the front surface and the front face being coplanar,

wherein the chamfer is in contact with the side face when the first connection part is rotated to be detached from the second connection part.

25. (Original) The connector of claim 24, further including:

a warpage preventing protrusion formed on the guide step to prevent the connection pins from being bent at the time of detaching the first connection part from the second connection part; and

a warpage preventing opening formed at a corner at which the side face, the front face and the guide step meet each other, the warpage preventing opening being extended from a connection slot adjacent to the side face.

26. (Original) The connector of claim 25, wherein the warpage preventing protrusion is protruded at an end portion of the guide step adjacent to the front face, the warpage preventing protrusion being placed in the guide groove to support the guide body when the first connection part is rotated to be detached from the second connection part.

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27. (Currently Amended) A liquid crystal display device comprising:

- a liquid crystal display panel that processes image data signals to display images by controlling liquid crystal disposed in the liquid crystal display panel;
- a driving module that provides the liquid crystal display panel with driving signals to control the liquid crystal in the liquid crystal display panel; and
- a connector that provides electrical connection between the driving module and an external device, the connector comprising:
 - a first connection part including:
 - a plurality of connection pins electrically connected with the driving module;
 - a supporting body that holds the connection pins; and
 - a guide body extended from a first longitudinal end of the supporting body in a direction substantially perpendicular to a longitudinal direction of the supporting body, the guide body having a guide groove formed at an inner face of the guide body; and
 - a second connection part including:
 - a plurality of connection slots that receive the connection pins to provide electrical connection between the connection pins and the external device, the connection slots each having an entrance hole at a front face of the second connection part;
 - a side face extended from the front face in a direction substantially perpendicular to a longitudinal direction of the front face;
 - a guide step formed on the side face to be inserted into the guide groove; and
 - a warpage preventing protrusion formed on the guide step to provide a recess portion at a selected region of the guide step to prevent the connection pins from being bent at the time of detaching the first connection part from the second connection part.

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28. (Original) The liquid crystal display device of claim 27, wherein the guide body of the first connection part includes a chamfer formed at an inner corner of an edge of the guide body, the edge being opposite to the supporting body, the chamfer being in contact with the side face and the guide step when the first connection part is rotated to be detached from the second connection part.

29. (Original) The liquid crystal display device of claim 27, wherein the second connection part further includes a warpage preventing opening formed at a corner at which the side face, the front face and the guide step meet each other, the warpage preventing opening being extended from a connection slot adjacent to the side face.

30. (Original) The liquid crystal display device of claim 29, wherein the warpage preventing opening forms a void space into which corresponding one of the connection pins is moved from the connection slot adjacent to the side face.

31. (New) A connector for electrically connecting first data lines to second data lines, comprising:

a first connection part including:

a plurality of connection pins electrically connected with the first data lines;

a supporting body that holds the connection pins; and

a guide body integrally formed with the supporting body and extended from a first longitudinal end of the supporting body in a direction substantially perpendicular to a longitudinal direction of the supporting body, the guide body having a guide groove formed at an inner face of the guide body; and

a second connection part including:

a plurality of connection slots that receive the connection pins to provide electrical connection between the first data lines and the second data lines, the connection slots each having an entrance hole at a front face of the second connection part;

a side face extended from the front face in a direction substantially perpendicular to a longitudinal direction of the front face;

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a guide step formed on the side face to be inserted into the guide groove; and
a warpage preventing protrusion formed on the guide step to prevent the
connection pins from being bent at the time of detaching the first connection part from
the second connection part,
wherein the guide step and the warpage preventing protrusion are integrally
formed with the side face.

32. (New) The connector of claim 31, wherein the guide body includes:
a first guide body portion to be in contact with the side face when the first and second
connection parts are combined; and
a second guide body portion to be in contact with the guide step when the first and
second connection parts are combined,
wherein the first and second guide body portions form side walls of the guide groove.

33. (New) The connector of claim 32, wherein the first guide body portion has a width
larger than a width of the second guide body portion.

34. (New) The connector of claim 33, wherein a difference between the widths of the first
and second guide body portions is substantially same as a height of the guide step.

35. (New) The connector of claim 31, wherein the warpage preventing protrusion is
protruded at an end portion of the guide step adjacent to the front face, the warpage preventing
protrusion being placed in the guide groove to support the guide body when the first connection
part is rotated to be detached from the second connection part.

36. (New) The connector of claim 35, wherein the warpage preventing protrusion has a
length smaller than a length of the guide step.

37. (New) The connector of claim 36, wherein the warpage preventing protrusion has a
width smaller than a width of the guide step.

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38. (New) The connector of claim 35, wherein the warpage preventing protrusion has a wedge shape of which top surface is smaller than a bottom surface.

39. (New) The connector of claim 31, wherein the second connection part further includes a warpage preventing opening formed at a corner at which the side face, the front face and the guide step meet each other, the warpage preventing opening being extended from a connection slot adjacent to the side face.

40. (New) The connector of claim 39, wherein the warpage preventing opening forms a void space into which corresponding one of the connection pins is moved from the connection slot adjacent to the side face.

41. (New) A connector for electrically connecting first data lines to second data lines, comprising:

a first connection part including:

a plurality of connection pins electrically connected with the first data lines;

a supporting body that holds the connection pins; and

a guide body extended from a first longitudinal end of the supporting body in a direction substantially perpendicular to a longitudinal direction of the supporting body, the guide body having a guide groove formed at an inner face of the guide body; and
a second connection part including:

a plurality of connection slots that receive the connection pins to provide electrical connection between the first data lines and the second data lines, the connection slots each having an entrance hole at a front face of the second connection part;

a side face extended from the front face in a direction substantially perpendicular to a longitudinal direction of the front face;

a guide step formed on the side face to be inserted into the guide groove; and

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a warpage preventing opening formed at a corner at which the side face, the front face and the guide step meet each other, the warpage preventing opening being extended from a connection slot adjacent to the side face.